

Induction of Labour (IOL)

Key Points

- Induction of labour should be offered whenever the risks of continuing the pregnancy outweigh the risks of induction of labour.
- The indication and method for proposed IOL must be documented clearly on Epic
- Women should be given access to written information about the IOL methods and process.

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Print copies must be destroyed after use.**

Abbreviations

ARM	Artificial Rupture of Membranes
CTG	Cardiotocograph
DAU	Day assessment unit
EFM	Electronic Fetal Monitoring
GDM	Gestational diabetes mellitus
IOL	Induction of Labour
IUD	Intrauterine death
IUGR	Intrauterine growth restriction
LGA	Large for gestational age
LSCS	Lower Segment Caesarean Section
MAC	Maternity Assessment Centre
PPH	Postpartum haemorrhage
PPROM	Preterm pre-labour rupture of membranes
PROM	Pre-labour rupture of membranes (at term)
PV	Per vagina
SGA	Small for gestational age
SROM	Spontaneous rupture of membranes
VBAC	Vaginal birth after Caesarean

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Introduction

An induced labour is one that is started artificially. Labour should be induced / augmented when either the maternal and/or fetal condition suggests that the potential risk to either is greater with the fetus in utero than following delivery.

Since every patient's history is different, and even the most exhaustive sources of information cannot cover every possible eventuality, you should be aware that all information is provided in this document on the basis that the healthcare professionals responsible for patient care will retain full and sole responsibility for decisions relating to patient care; the document is intended to supplement, not substitute for, the expertise and judgment of physicians, pharmacists or other healthcare professionals and should not be taken as an indication of suitability of a particular treatment for a particular individual.

Information and Decision making

Discuss preferences about mode of birth with women early on in their pregnancy. From 16 weeks' gestation, all modes of delivery should be explored. Take into account their individual circumstances and discuss that options for birth can include expectant management, induction of labour or planned caesarean birth. Record this discussion and the woman's preference on Epic. Confirm her preference towards the end of the pregnancy. See [Antenatal Care and Booking](#) guideline for further information.

Explain to women that induction of labour is a medical intervention that will affect their birth options and their experience of the birth process. This could include:

- vaginal examinations to assess the cervix are needed before and during induction, to determine the best method of induction and to monitor progress.
- their choice of place of birth will be limited, as they may be recommended interventions (for example, oxytocin infusion or continuous fetal heart rate monitoring) that are not available for home birth or in midwife-led birth units
- there may be limitations on the use of a birthing pool.
- there may be a need for an assisted vaginal birth (using forceps or ventouse), with the associated increased risk of obstetric anal sphincter injury (for example, third- or fourth-degree perineal tears). Pharmacological methods of induction can cause hyperstimulation – this is when the uterus contracts too frequently or contractions last too long, which can lead to changes in fetal heart rate and result in fetal compromise.
- an induced labour may be more painful than a spontaneous labour and as result, women may be more inclined to request an epidural for pain relief.
- their hospital stay may be longer than with a spontaneous labour.

Discuss with women being offered induction of labour:

- the indication for IOL
- when, where and how IOL would be carried out
- the alternatives to IOL
- methods of induction
- pain relief options
- the options in unsuccessful IOL and how this will affect options
- around 36 weeks, written information (or access to information) detailing the IOL process, and the risks should be provided

The woman should be given time to consider her options and be encouraged to have discussions with the people supporting her before deciding on IOL.

The woman should be provided with evidence-based information tailored to her needs. The provision of any written information or the presence of information on the website must be documented on Epic.

Recognise that women can decide to proceed with, delay, decline or stop an induction. Respect the woman's decision, even if healthcare professionals disagree with it, and do not allow personal views to influence the care they are given. Record the woman's decision on Epic.

Membrane sweep

The woman should be informed:

- what a membrane sweep is
- that membrane sweeping might make labour more likely to start without the need for pharmacological or mechanical methods of induction
- that pain, discomfort and vaginal bleeding are possible from the procedure

At antenatal visits from 39⁺⁰ weeks, discuss with women if they would like a vaginal examination for membrane sweeping, and if so, obtain verbal consent from them before carrying out the membrane sweep. Check there is no evidence of a low-lying placenta, ruptured membranes or unstable lie before membrane sweeping.

Women with a booked induction date should be able to have a sweep at the discretion of the midwife within 7 days before a booked induction of labour.

Discuss with women whether they would like to have additional membrane sweeping if labour does not start spontaneously following the first sweep. The efficacy of repeated membrane sweeping and membrane sweeping before 39 weeks is not known.

Post dates service

To support women's choices through the reduction of unwanted intervention, low risk women should be offered the opportunity to use complementary therapies in addition to a membrane sweep to encourage spontaneous labour. (Refer to the [Use of Complementary Therapy for Prolonged Pregnancy](#) guideline).

Scheduled midwifery-led post dates clinics are available within Wexham Park and Frimley Park maternity services. Women will be signposted to available services by their community midwife.

Indications for IOL

Induction of labour should be offered whenever the risks of continued pregnancy outweigh the risks of induction of labour.

Prolonged pregnancy / Post mature pregnancy

Women should be offered IOL for prolonged pregnancy at the 40-week antenatal appointment because of the increased risk of pregnancy over 42 weeks (increased likelihood of caesarean birth, increased likelihood of the baby needing admission to a neonatal intensive care unit, increased likelihood of stillbirth and neonatal death). Clinicians should be aware that the 2020 MMBRACE report on perinatal mortality identifies women of minority ethnic backgrounds at higher risk of stillbirth – 5.84/1,000 births (black) versus 4.69/1,000 (Asian), 2.71/1,000 (white).

The risks and benefits of induction should be discussed with the woman taking into account her specific situation to promote full involvement in the decision making. For women with uncomplicated pregnancies induction of labour should be booked between 41⁺⁰ to 42⁺⁰. The exact timing should take into account the woman's preference and local circumstances. This includes availability of induction of labour booking spaces. Where possible, adhere to the agreed daily limit of women for IOL. The midwife can directly book these without referring to a consultant clinic.

The decision to induce labour solely for prolonged pregnancy should be made jointly between the woman and the obstetrician or midwife. Factors that may influence the decision include:

- maternal choice
- accuracy of gestational age of pregnancy
- fetal welfare as judged by fetal movements, cardiotocograph (CTG) or the size of the baby
- maternal welfare - her physical and psychological state

The healthcare professional that arranges the IOL for prolonged pregnancy must be satisfied that:

- vaginal birth is the most appropriate mode of birth.
- the expected date of delivery (EDD) is correct by rechecking the first trimester scan (8-14 weeks of pregnancy) unless the EDD was calculated after fertility treatment such as IVF or ICSI.
- the advantages of inducing labour outweigh the disadvantages.
- the woman should be directed to the relevant information on the trust maternity website and to watch the information video on IOL.
- unless specifically requested by medical staff, women being routinely admitted for IOL do not need to be seen by a doctor, however the admitting midwife should review the mother's history in full.
- if the midwife has concerns about a previously unrecognised problem from the history or clinical examination, these should be raised with an obstetrician prior to commencing induction.

An appointment should be made in the appropriate post-dates clinic when IOL is arranged.

If a woman chooses not to have induction of labour, discuss the woman's options from this point on with her (for example, expectant management or caesarean birth) and record the woman's decision and refer to an obstetrician.

From 42 weeks, women who choose expectant management over IOL should be offered an appointment with a consultant obstetrician or consultant midwife. This appointment is to ensure that women are appropriately counselled about the increased risk of intrauterine death (IUD) and offered antenatal computerised CTG monitoring whenever the woman wishes and in the event of RFM. They should also have an ultrasound scan to estimate liquor volume and doppler if indicated. The consultation should ensure that clear advice is given and recorded to report any reduction in fetal movements as a matter of urgency.

Management plan for women who choose expectant management over IOL

If expectant management is chosen over IOL, this decision should be respected and fully documented on Epic and an individual management plan developed.

If the woman is under midwifery-led care, the midwife should contact a member of the senior midwifery team for advice and/or support. Ideally this should occur prior to 42+0 to allow time for discussions to occur. The matron/senior midwife should have a discussion with the midwife about information provided and invite the woman for a further discussion of risks and management of care if required.

If expectant management could increase the risk of an IUD, women should be counselled about this possibility. CTG monitoring should be offered whenever the woman wishes and in the event of RFM. An ultrasound estimation of liquor volume and Doppler should be offered if indicated. Monitoring only gives a snapshot of the current situation, and cannot reliably predict any changes after monitoring ends, but provides information on how their baby is at that moment and so may help them make a decision on options for birth.

Women should be advised to report any reduction in fetal movements or a change in the pattern of movements as a matter of urgency.

Women who choose expectant management when IOL has been recommended, either prolonged pregnancy in low-risk women or at any stage for high-risk women, should be referred for an obstetric review, either in Antenatal Clinic or in the Maternity Assessment Centre (MAC) (WPH) or the Day Assessment Unit (DAU) (FPH). This will provide another opportunity for the woman to discuss her care, ask any questions and discuss any associated risks with a senior obstetrician.

Offer women who choose to await the spontaneous onset of labour the opportunity to discuss their decision again at all subsequent reviews, if they wish to do so. Advise women to contact the maternity unit if they change their mind before their next appointment.

Preterm pre-labour rupture of membranes PPRM

See guideline for management of [Preterm Pre-labour Rupture of Membranes](#).

Pre-labour rupture of membranes at term PROM

See guideline for [Pre-labour Rupture of Membranes at Term](#).

Previous Caesarean section

Advise women who have had a previous caesarean birth that:

- induction of labour could lead to an increased risk of emergency Caesarean birth.
- induction of labour could lead to an increased risk of uterine rupture (the risk of uterine rupture is double the woman's background risk of uterine rupture. On average the risk will increase from 1:200 to 1:100).
- Women who have had a previous caesarean section for failed IOL should not be offered IOL as their background uterine rupture rate is already higher and their success rate of IOL much lower.
- the methods used for induction of labour will be guided by the need to reduce these risks, for example, by using a balloon catheter induction.
- some methods used for induction of labour may not be suitable (for example, Propess® is contra-indicated in women with a uterine scar).
- If birth needs to be expedited, offer women who have had a previous caesarean birth a choice of:
 - induction of labour
 - planned caesarean birth.

Take into account the woman's circumstances and preferences and record the discussions and plan. Advise women that they can choose not to have induction of labour or caesarean birth, even when it may benefit their or their baby's health. Explain and document why we would advise IOL when it may benefit their or their baby's health.

See guideline [Birth Choices after Caesarean Birth](#) for more information.

Maternal Request

Consider requests for IOL only after discussing the benefits and risks with the woman, taking into account the woman's circumstances and preferences. We would not usually advise IOL for maternal request below 39 weeks due to the small risk of failed induction.

Breech presentation

We do not offer IOL when the fetus is in a breech presentation.

Fetal growth restriction

In cases of fetal growth restriction and small for gestational age (SGA) babies an individualised plan as to the location and method of induction should be documented. The plan is dependent on the severity of predicted growth restriction. With significant IUGR where labour is still deemed an option, we would usually recommend a balloon IOL if ARM is not yet possible.

Suspected fetal macrosomia

Discuss with women without diabetes and with suspected fetal macrosomia that the options for birth are expectant management, induction of labour or caesarean birth. Please follow our guideline on [Management of Suspected Large for Gestational Age Fetus in Non-diabetic Mothers](#).

History of precipitate labour

Do not routinely offer induction of labour to women with a history of precipitate labour to avoid a birth unattended by healthcare professionals.

Location of induction of labour

Labour Ward

Women with a multiple pregnancy, <37 weeks gestation or previous CS are to stay on labour ward if they are having prostaglandins. They do not need to stay on the labour ward if they have a balloon inserted.

Antenatal Ward

All other women should be admitted to antenatal ward for the start of induction. Some women may be suitable to go home after starting an induction.

Outpatient Induction

In some cases, women with an intracervical balloon or controlled release dinoprostone vaginal delivery system (Propess®), may be offered the option of going home (outpatient induction) during IOL. A timeframe must be agreed between the woman and her midwife. All women being considered for home leave should have normal observations and confirmed cephalic presentation with intact membranes.

Indications suitable for either outpatient balloon or outpatient Propess® include:

- | |
|---|
| • Post-maturity (41 – 42 weeks) without any other risk factors |
| • Maternal request IOL at 39 – 41 weeks without other risk factors |
| • Pelvic girdle pain/discomfort at 39 – 41 weeks without any other risk factors |
| • IVF pregnancy with no other risk factors |

Indications suitable for outpatient IOL with a balloon

- | |
|---|
| • Advanced maternal age >40 |
| • GDM well-controlled |
| • Large for gestational age |
| • Multiple pregnancy (following discussion with Consultant) |
| • Previous Caesarean Section with no other risk factors |
| • Previous traumatic birth |
| • IVF pregnancy with no other risk factors |

Any consideration for outpatient IOL not mentioned above should be discussed with a consultant.

Discuss the benefits and risks of going home.

The following women are **not** suitable for outpatient induction regardless of method:

- | |
|---|
| • Gestational age <37 weeks |
| • Living in area not covered by Frimley Health community midwives |
| • Any CTG concerns prior to induction of labour |
| • Antepartum haemorrhage |
| • Free fetal head/unstable lie/recent unstable lie |
| • Intrahepatic cholestasis of pregnancy (OC) with Bile acids >100 |
| • PIH or PET |

• Limited English
• Recurrent reduced fetal movements
• SGA/IUGR baby/abnormal dopplers
• Social complexity
• Two or more risk factors
• SROM

Dinoprostone and as required analgesia and anti-emetics should be prescribed on Epic and the MAR chart completed accordingly. Preferably, this should be done at the time of booking the IOL.

Women who choose to go home should be advised to return to the antenatal ward for a full assessment and CTG monitoring when the following occurs:

- 12-24 hours after insertion of balloon or 24 hrs after Propess®
- if membranes rupture
- with any reduced or altered fetal movements
- when contractions begin
- any excessive pain
- with any vaginal bleeding
- if the Propess® or intracervical balloon has fallen out
- if they have phoned the department with any concerns

Women who choose to go home should be given written information including when to return and the telephone number of the antenatal ward (FPH) and ward 21 (WPH) for advice. All telephone calls received from or made to women who are at home with Propess® or balloon in situ, should be recorded on Epic. The antenatal midwife in charge should also be informed. All women on return should have at least 20 minutes of CTG monitoring.

Booking an induction

The indication and plan for method of IOL must be documented clearly on Epic. No highly complicated cases, such as women with a BMI>50, twins or women with a previous section should be induced electively at the weekend. If this is required, this should be a consultant decision, and the reason should be clearly documented. Balloons for these inductions should not be inserted on Fridays or Saturdays, but can be inserted on Sundays, to allow them to labour Monday to Friday. Misoprostol regimes in these women should ideally be started on Mondays to Fridays and Propess inductions on Mondays to Thursdays.

Wexham Park site

Induction of labour should be booked and scheduled on Epic.

There should be no more than 4 inductions booked for each day to allow for the women with spontaneous labour and augmentations to be adequately cared for. If it becomes necessary for medical reasons to induce a woman on a 'full' day, the consultant should liaise with the midwife in charge of the antenatal ward to prioritise and manage the workload. If Labour Ward is already busy it is the responsibility of the consultant to decide which of the booked inductions can be delayed to accommodate their urgent

case. The midwife in charge on the antenatal ward must liaise with the labour ward coordinator prior to commencing any inductions.

An IOL letter is sent to the women stating they should phone the ward between 8-8.30am to check bed availability, and that at busy times, it may be necessary to delay their IOL until later in the day. This is to manage patient expectation of an early morning IOL if the ward is already full.

Frimley Park site

Induction of labour should be booked and scheduled on Epic. There should be no more than 5 inductions booked for each day. High risk inductions i.e. pre-term/twins should be conducted on Labour Ward if prostaglandins are being used and placed in the labour ward diary in addition to the electronic diary. All balloons, including in women who have had a previous section, can be inserted on the antenatal ward, but only after the labour ward consultant has reviewed the notes to check that they are happy for the balloon/IOL to go ahead.

Admit women at timed intervals to allow prompt attention to each woman on her arrival. Women whose induction of labour is added on the day should be discussed with the labour ward coordinator, the consultant on duty, booked in the online diary and antenatal ward informed.

Balloon inductions in high-risk women such as previous caesarean birth and growth restriction, should ideally be timed late morning and early afternoon, to allow ARM to occur 12-18 hours later early the following morning, so they are on oxytocin during the day.

Assessment prior to induction of labour¹

- Check there is no evidence of low-lying placenta on previous ultrasound scans
- Record the woman's observations on Flowsheet. Her pulse should be repeated every time electronic fetal monitoring (EFM) is performed and documented on the CTG.
- Check and record the presentation and engagement of the presenting part by abdominal palpation. Confirm presentation with ultrasound scan.
- At vaginal examination, check for umbilical cord presentation and calculate the modified Bishop score.
- Check blood and microbiology results in the last month for the pregnancy
- Ensure analgesia and antiemetics are prescribed or are available under a midwifery PGD.
- Check with the woman whether she has read the trust information on IOL and whether she has any further questions.

Bishop's Score

The Bishop's score is a group of measurements made by doing a vaginal examination. The written record of the vaginal examination (VE) must include the below criteria and score given.

Explain to women that a vaginal examination to assess the readiness of the cervix (recorded as the Bishop score) will help to decide which method of induction they will be offered first and obtain consent to carry this out.

It is essential to document the Bishop score with IOL as cervical changes and head descent will occur first before the cervix starts to dilate further and so a woman may be making sufficient progress even when there is no change in cervical dilatation.

Cervical feature	Modified Bishop score			
	0	1	2	3
Dilation (cm)	< 1	1–2	2–4	> 4
Length of cervix (cm)	> 4	2–4	1–2	< 1
Station (relative to ischial spines)	–3	–2	–1/0	+1/+2
Consistency	Firm	Average	Soft	–
Position	Posterior	Mid/anterior	–	–

A score of eight or more generally indicates that the cervix is favourable. This score should not be used exclusively to determine if artificial rupture of membranes is possible. Clinical judgement considering the ease of ARM and appropriateness of prostaglandin administration should form part of the clinical decision-making process.

Fetal monitoring prior to and during induction of labour

Fetal monitoring should conform with the [Intrapartum Fetal Heart Monitoring](#) guideline. Prior to administration of vaginal PGE₂ or an intracervical balloon fetal wellbeing and absence of significant uterine contractions should be confirmed via normal antenatal continuous EFM for 20 minutes.

Following administration of vaginal PGE₂ or an intracervical balloon fetal wellbeing should be confirmed via:

- continuous EFM for 30-60 minutes
- a further continuous EFM for 20 minutes:
 - every 6-8 hours if she is an inpatient
 - When she experiences painful regular contractions
 - on membrane rupture
 - if she is awake overnight and uncomfortable
 - if there are any other concerns, for example, reduced fetal movements
 - if she requests pain relief
 - See misoprostol regime further below before which doses a CTG should be done

A further continuous EFM should be completed for 20 minutes if the woman has gone home and returns for any reason.

If the CTG is normal it can be discontinued unless there are other indications for continuous EFM.

If the fetal heart rate is abnormal or there are excessive uterine contractions continue or restart continuous EFM, do not administer any more doses of prostaglandin, remove

vaginal PGE2 pessary if there is one in situ. Obtain a review from an obstetrician. Consider Terbutaline. See below.

A further continuous EFM for 20 minutes should be completed if IOL is unsuccessful, and at least every 6-8 hours whilst an inpatient.

Methods of induction

The method of induction recommended will depend on the circumstances requiring induction e.g. the state of the cervix as defined by the Bishop's score along with the woman's informed choice. All assessment and interventions must be documented in Flowsheet on Epic. As with all interventions, procedures and administration of drugs, informed consent must be gained, which must include a conversation regarding possible benefits, risks and side-effects and be contemporaneously documented.

Methods of induction may be by any or a combination of the following:

- Dinoprostone controlled release vaginal delivery system (Propess®)
- Misoprostol in 25 mcg doses (Angusta®)
- Intracervical balloon
- Artificial rupture of the membranes (ARM)
- Synthetic oxytocin (Syntocinon®)

Discuss with women the risks and benefits of different methods to induce:

- All prostaglandins and oxytocin can cause tachysystole or hyperstimulation.
- When using pharmacological methods of induction, uterine activity and fetal condition must be monitored regularly.
- If hyperstimulation occurs, the induction treatment will be stopped by giving no further medication, or by removal of vaginally administered products when possible.
- Hyperstimulation can be treated with tocolysis (terbutaline 250 mcg s/c)
- A balloon is less likely to cause hyperstimulation than pharmacological methods and is therefore deemed the safest of the options.
- With balloon inductions, women are on average on oxytocin for 2-6 hours longer than with prostaglandins.
- Propess inductions have the longest start of IOL to delivery time and also the highest hyperstimulation rates.
- The main advantage of Propess is that low risk women can go home with it and these women may still be able to birth in the MLU if they do not require oxytocin.
- Misoprostol inductions have the shortest start of induction to delivery time, the highest chance of ending with a vaginal birth and the highest patient satisfaction rate.
- With misoprostol, there is less hyperstimulation compared to Propess but more than with a balloon.
- With misoprostol, established labour on average starts earlier than with Propess or balloon and therefore women tend to move to labour ward earlier in the process.
- Misoprostol is more suitable than Propess or balloon for women who struggle with vaginal examinations.

For women with a Bishop score of 6 or less, offer induction of labour with misoprostol or Propess® if suitable.

For women with a Bishop score of 6 or less, consider a balloon when prostaglandins are not suitable or when a balloon is more suitable, for instance when there is a history of hyperstimulation with prostaglandins, previous caesarean section, fetal growth restriction, in grand-multips or if this allows the woman to go home or if the woman chooses to have a balloon induction.

For women with a Bishop score of more than 6, offer induction of labour with ARM and an intravenous oxytocin infusion. If this is a 'cold' ARM, i.e the woman was not already contracting at the time of ARM, do not allow more than an hour from ARM to start of oxytocin.

Vaginal prostaglandin protocol

Vaginal PGE2 should be administered within one hour of arrival for IOL if clinically appropriate.

Prior to administration, a full set of observations and assessments must be undertaken.

Propess® protocol

Propess® should only be used for women who fulfil the criteria below and if they prefer this over misoprostol (Angusta®). All other women should receive an intra-cervical balloon. Use only when all of the following criteria are met:

- Women at term, 37-42 weeks. (Propess® is not licensed for use in women less than 37 weeks but can be used if a consultation between the woman and an obstetrician has occurred and is documented).
- cephalic presentation
- intact membranes
- no previous uterine scar
- no more than 3 full term vaginal births
- Bishop score of ≤ 6
- It should be prescribed together with PRN analgesia, PRN anti-emetics and PRN terbutaline

Remove from the freezer and directly insert high into the posterior vaginal fornix. The woman should be recumbent for 20-30 minutes after insertion. Following this initial advice women should be encouraged to adopt positions and mobilise at a level they feel comfortable with. Follow the local processes in place for ensuring all staff are aware that Propess® is in situ and removal must be actively ensured.

Remove it:

- after 24 hours
- if labour is established (regular contractions 4-5 in 10 and cervix ≥ 4 cm dilated)
- if there is evidence of hyperstimulation (see below)
- if there is vaginal bleeding other than a show
- if there is an abnormal CTG
- evidence of maternal adverse systemic effects e.g. new onset nausea, vomiting, hypotension or tachycardia

Reassess the cervix and re-calculate the Bishop score 24 hours after insertion. If the cervix is clinically judged for ARM to be possible, transfer to labour ward. If ARM is not possible, offer a balloon.

If the Propess® falls out within 24 hours, it can be repositioned if it is in the lower vagina or in the woman's underwear. If it falls out completely, reassess the cervix.

If the woman is at home and the Propess® falls out, she must return for an antenatal assessment, and proceed with the following:

If the cervix is **favourable** for ARM or clinically judged for an ARM to be possible, transfer to Labour Ward.

If the cervix is **not favourable** for ARM or the cervix is clinically judged that an ARM is not possible, consider a replacement Propess® for the remainder of the 24 hours.

The removal of Propess® must be documented in the maternity records.

Prostin E2® vaginal gel (Prostin gel)

Due to supply issues, we are limiting the use of Prostin gel to women with PROM with a closed cervix. It can still be used on a case by case basis if deemed the most suitable option.

Post prostaglandin IOL observations

Post administration of ProstinE2® vaginal gel or Propess®:

The woman should be instructed to inform a midwife if:

- Contractions become regular (every 5 minutes or more frequent)
- She becomes uncomfortable with contractions
- She is bleeding
- Membranes rupture
- Propess® falls out or drops lower in the vagina

The midwife should inform the obstetrician (ST2 or above) if:

- Contractions are more frequent than 5:10
- If she has concern about the fetal heart / abnormal CTG
- If the woman has any vaginal bleeding
- Severe nausea and vomiting
- If Propess® has had to be removed for any reasons other than 24 hours post insertion or commencement of labour.

Hypertonic uterine activity

Definitions are as follows:

- Tachysystole is >5 contractions in 10 minutes with a normal CTG (*usually not distressing for the woman*)
- Hypertonus = painful contractions lasting >90 seconds with a normal CTG.
- Hyperstimulation = Tachysystole or hypertonus with an abnormal CTG.

The following action should be taken in the case of tachysystole or hypertonia:

- Start/continue continuous EFM. Perform a VE and check for vaginal loss/bleeding.
- Offer pain relief as required.

- Escalate to an O&G ST2 or above if the situation persists, even if the CTG is normal.
- Remember the increased risk of a PPH.

The following action should be taken in the case of hyperstimulation:

- Inform on call obstetrician ST2 or above.
- CTG monitoring.
- Remove Propess® if in situ.
- Consider administering subcutaneous terbutaline (250 micrograms s/c)
- Place woman in left lateral position.
- Transfer to Labour Ward – perform a VE + check for PV loss/bleeding
- IV access, FBC, group & save.
- If a synthetic oxytocin infusion is in progress, reduce the dose gradually or stop infusion until contractions are <5 in 10 minutes, lasting up to 60 seconds, or until the CTG normalises. If there are pathological changes in the fetal heart rate consider stopping the oxytocin.
- If the uterus does not relax and the CTG does not improve then give 250 micrograms (or a second dose) of subcutaneous terbutaline as tocolysis.
- Avoid ARM until contractions <5 in 10 minutes for 4 hours.
- Offer pain relief
- Following vaginal birth, consider 40 units synthetic oxytocin infusion to minimise risk of a PPH. Carbetocin should be used if the woman has a caesarean section.

Uterine rupture

If uterine rupture/scar dehiscence is suspected during induction of labour, the baby should be delivered by emergency caesarean section and the uterine rupture managed by a senior obstetrician. An online incident report form should be completed for these cases.

Oral Misoprostol (Angusta®)

Contraindications for the administration of Misoprostol in IOL

The following people are contraindicated for the prescription of oral misoprostol 25mcg in the induction of labour:

- Known allergies linked to misoprostol
- Active labour
- Previous uterine surgery (caesarean section, abdominal or lap myomectomy)
- History of known or highly suspected previous uterine perforation
- Placenta praevia/ accreta or any other contra-indication to vaginal birth
- Kidney failure (CKD 2 or 3, significant AKI or if creatinine is raised above 88)
- Signs of fetal compromise including abnormal CTG, meconium-stained liquor, vaginal bleeding.
- Fetal malpresentation

A modified procedure for inducing labour will be necessary, if any of the following are present:

- Suspected rupture of membranes
- Suspected fetal growth restriction (<10th centile)

Prescription

Misoprostol 25mcg should be administered orally every 2 hours, not exceeding 8 doses within a 24-hour period. With a live fetus, it should not be given sublingual or buccal as absorption is too fast then. If active labour occurs, subsequent doses should be discontinued. **Oxytocin for induction/augmentation must not be given within 4 hours of the final misoprostol dose.** Oxytocin infusion to prevent or treat uterine atony after birth can still be given within 4 hrs after last misoprostol dose, as can all other utero-tonics.

It is recommended that a prescription bundle is provided following a full history, antenatal assessment and consent provision, as follows:

- Misoprostol 25mcg oral tablet 8 doses 2 hourly in 24-hour period
- Antiemetic PRN
- Pain relief PRN
- Terbutaline 250 mcg = 0.5 mls PRN

Administration Process

Following informed consent, full antenatal assessment and prescription, the following steps should be taken (See flow chart):

- Conduct a baseline vaginal examination with consent to assess Bishops score
- If Bishops score is ≤ 6 continue with process. If Bishops score is > 6 , offer ARM
- Prior to administration, monitor fetal wellbeing using CTG for a minimum of 30 minutes, utilising Dawes Redman if no uterine activity is present.
- Give the first dose of oral misoprostol 25mcg
- Review 2 hourly, or earlier if indicated, with abdominal palpation, assess frequency and duration of contractions and listen into fetal heart rate
- Continue to administer ongoing 2 hourly doses of oral misoprostol in the absence of active labour or fetal distress. Further doses of misoprostol can be given when there are contractions, providing they are irregular and less than 3:10
- After the baseline VE, no further VE's are required until no further misoprostol can be given, which is either when you think she might be in established labour or when contracting 3-4:10 when next dose is due or 2 hrs after the 8th dose.
- Undertake CTG monitoring for a minimum of 30 minutes to assess fetal wellbeing in advance of every 3rd, 5th and 7th dose of misoprostol
- In the event of spontaneous rupture of membranes (SROM) during the IOL process or diagnosis of active labour through the onset of regular painful uterine contractions 3:10, further doses of misoprostol should be ceased and a transfer to the intrapartum setting should be arranged for ongoing IOL management.
Oxytocin to induce or augment labour should not be given within 4 hours of the last dose of misoprostol. (oxytocin infusion to prevent or treat uterine atony after delivery can still be given at any time, as can all other utero-tonics). Place of

birth options should include birth unit care settings unless there are contraindicating risk factors. Please refer to local guidelines for place of birth inclusion criteria and outside of guideline care planning.

Pre IOL prolonged/pre labour rupture of membranes (PROM)

In the event of PROM requiring IOL, this protocol should be followed for a **maximum of 3 oral misoprostol 25mcg doses**

Suspected fetal growth restriction (<10th centile or significant tailing off of growth)

- Consider cervical ripening balloons as alternative if available.
- When no alternative methods are available, or if the patient prefers oral misoprostol, for instance because she struggles with vaginal examinations, a senior obstetrician should conduct a risk assessment to confirm that the fetus is suitable for labour before proceeding with the process outlined above.

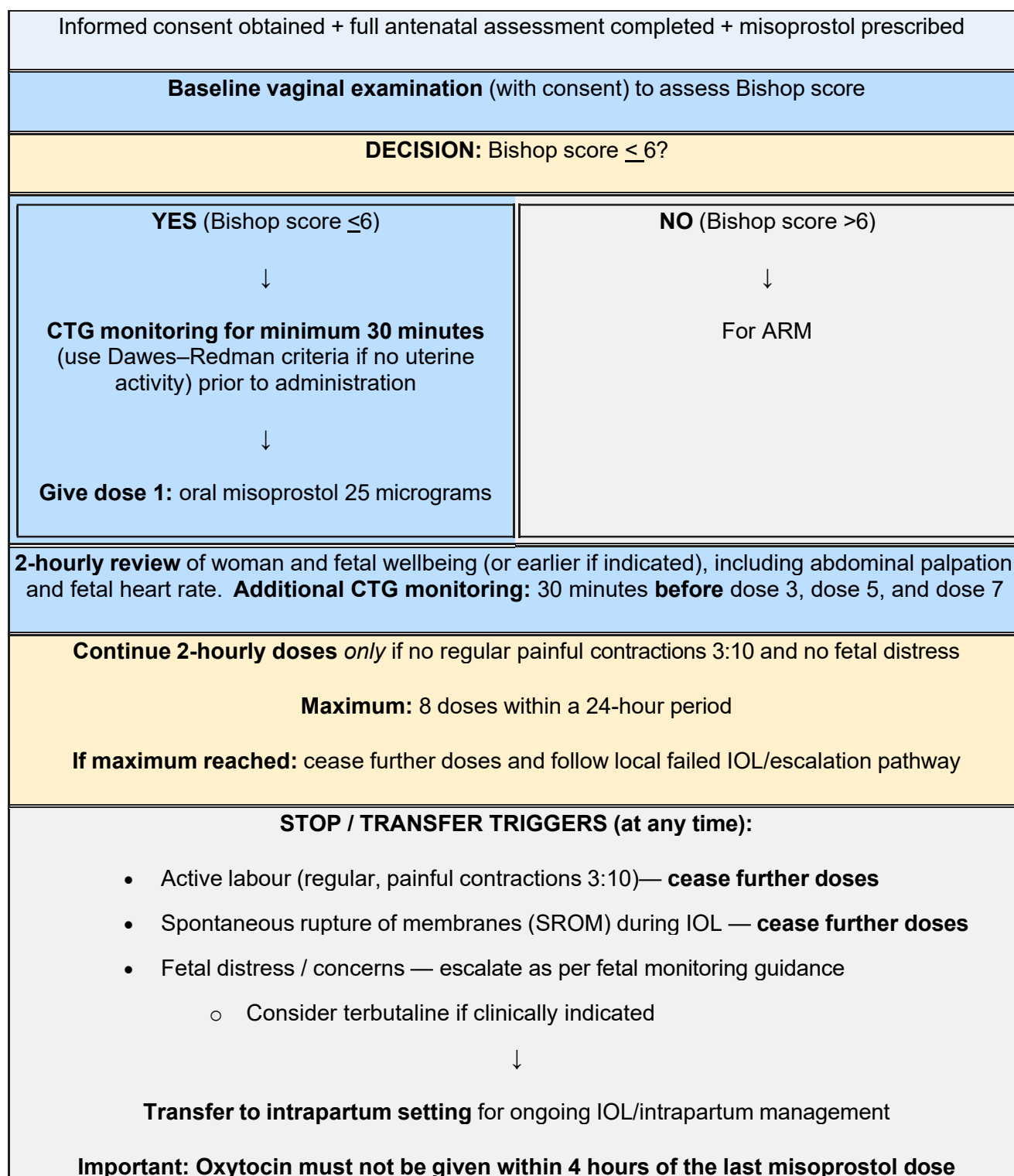
Failure to stimulate labour using misoprostol

Consider a balloon as alternative. This can be inserted if 2 hours after the 8th dose of misoprostol ARM is not possible.

If resuming IOL with an alternative prostaglandin agent such as Propess® is considered, a rest period of 24 hours is advised to ensure complete metabolism of misoprostol and minimize the risk of uterine hyperstimulation. However, a balloon is preferable if prostaglandins have failed already.

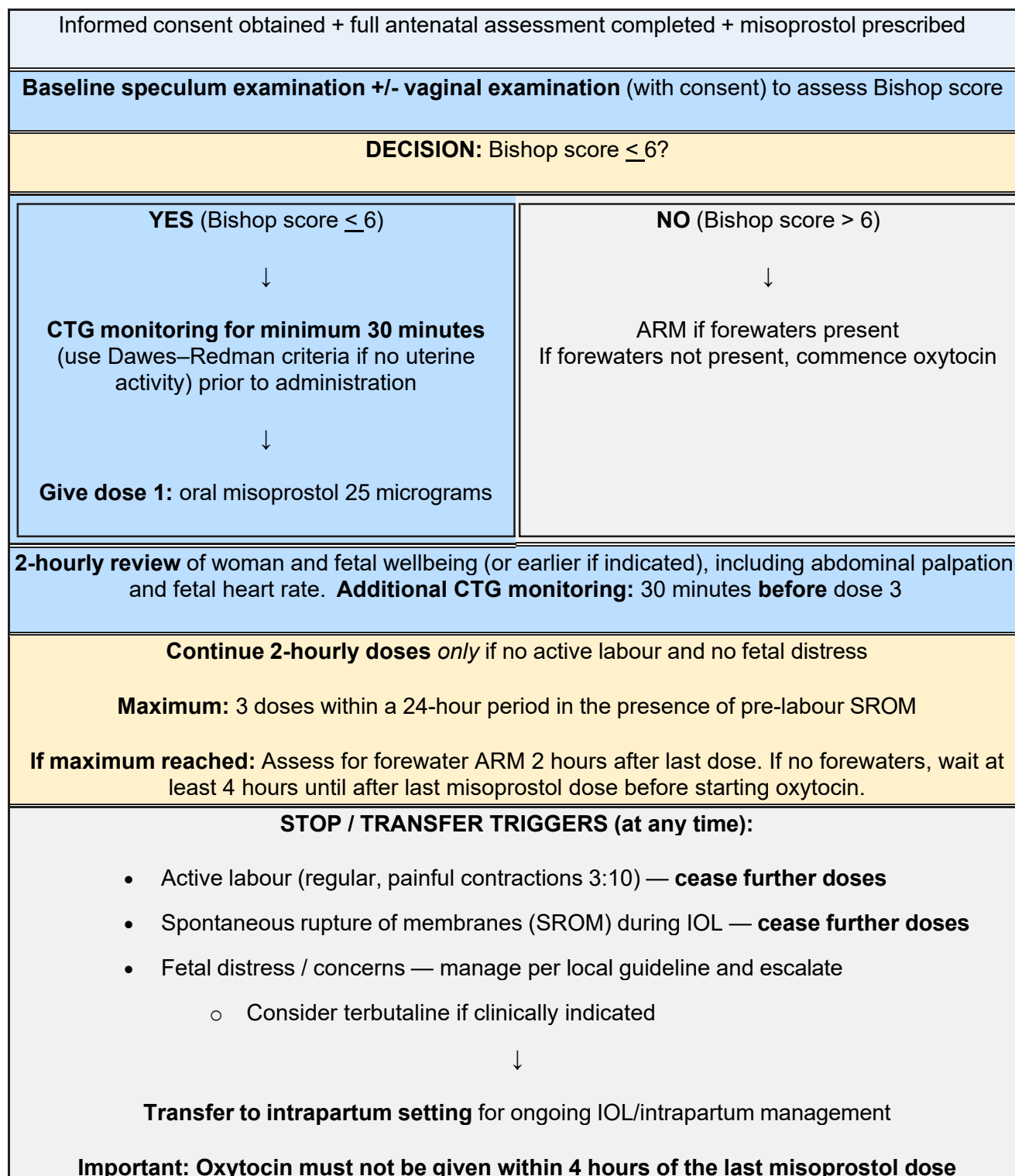
Misoprostol 25mcg Process Flow Chart

This flow chart details the process for IOL using 25mcg misoprostol for term IOL



Misoprostol 25mcg Process Flow Chart- Pre labour SROM Variation

This flow chart details the process for IOL using 25mcg misoprostol for term IOL in the presence of pre-labour SROM.



Pre Labour SROM variation: If induction is required following pre-labour rupture of membranes (PROM), follow this protocol for a **maximum of 3** oral misoprostol 25 microgram doses.

Induction of Labour Using an Intracervical balloon

The use of the intracervical catheter for cervical ripening has been shown to be an efficient method to induce labour. It is less likely to cause hyperstimulation than pharmacological methods which makes it suitable for use in women with previous LSCS, women with growth restricted babies and outpatient induction of labour.

There are two types of balloon in use at the trust – 1. Foleys balloon catheter can only be inserted by a doctor trained in insertion 2. Cook Balloon can be inserted by any trained midwife or doctor. Though Foley's are not licensed for use as a cervical balloon, they are endorsed by NICE for this purpose.

Data from an open-label randomised controlled trial suggests in women with an unfavourable cervix at term, the success of IOL with an intracervical catheter is similar to the success of IOL with vaginal prostaglandins. Women who have had cervical ripening by balloons, are on average on oxytocin for 2-6 hours longer than those who have had prostaglandins. The total length of time of IOL from start to delivery is shorter with a balloon compared to Propess®.

Intracervical balloons can be used for women who fulfil the criteria below

- Previous LSCS
- Fetal growth restriction
- Outpatient induction of labour if meets the criteria
- Grand-multips (P4 or more)
- Previous precipitate labour
- Previous myomectomy with no breach of the uterine cavity
- Previous reaction to prostaglandins
- Maternal preference. This includes but is not limited to women who want to go home who wouldn't be allowed home with Propess®.

Intracervical balloons should not be used in the following circumstances:

- Placenta praevia or Vasa praevia – these women need a caesarean section.
- Active herpes lesions
- Ruptured membranes
- Malpresentation

Women should be informed that potential risks associated with an intracervical balloon include:

- Discomfort
- Antepartum bleeding
- Women who struggle with vaginal examinations

Women undergoing IOL with an intracervical balloon should be admitted to an area where lithotomy is available, and privacy and dignity can be maintained through the procedure of insertion.

A CTG should be performed for 20 minutes prior to intracervical balloon insertion.

The following equipment is required to be available for the insertion of an intracervical balloon:

- Cusco's speculum with light attachment or lamp (Some may find it easier to insert without using a speculum)
- Foley's Balloon Catheter, Ch 16 (30-50ml balloon) or Cook Balloon
- Chlorhexidine solution
- Vaginal examination pack
- Swabs x5
- Sponge-holders (metal) x2 or a long-handled Spencer Wells or long non-toothed forceps
- Syringe 20ml + 10ml
- Water for injection between 30 – 80 mls depending on type of balloon being used
- Lubricant jelly

Perform vaginal examination and assess Bishop score, if BS 6 or less or clinically judged an ARM is not possible, continue process for intracervical balloon induction.

Position woman in lithotomy with leg supports, some practitioners may be able to complete the procedure without the use of lithotomy. However, the IOL should always be commenced in an area where this is available without transferring the woman.

Use a swab on sponge holding forceps to cleanse the vagina with chlorhexidine.

Insert speculum and visualise the cervix or alternatively, use hands to manipulate catheter through the cervical os (whichever method operator more comfortable with/achieves insertion of catheter).

Insert intracervical catheter (Foley's - 16Ch, 30-50ml balloon, 2-way catheter) through the internal os of the cervix using sponge holding forceps, a long spencer wells or long non toothed forceps to assist. NB- this catheter is made from latex.

Inflate the balloon with 30mls of water.

Gently withdraw the catheter until it rests at the level of the internal os.

Confirm correct placement with vaginal examination.

Remove speculum.

Do not use a plastic clamp or any other type of clamp.

Place purple wrist band on the woman to indicate that the catheter is in situ. Perform a CTG for 30 mins. If normal, the woman can be moved to the antenatal ward or can go home to continue outpatient induction of labour.

When balloon falls out, re-examine and perform an ARM if possible on Labour Ward. If ARM not possible then a review by an obstetrician is required.

If balloon is still in place after 24hrs, remove and re-examine to assess if ARM is possible. If ARM is not possible, an obstetrician should review and discuss further management options.

If SROM with intracervical catheter in situ occurs it should be removed as soon as possible.

Following the occurrence of an ARM/SROM- a CTG should be performed for 30mins. Discuss timings for starting synthetic oxytocin infusion if appropriate or follow previous consultant made plans.

Remove the intracervical balloon catheter:

- after 12 - 24 hours. Timing is flexible and dependant on labour ward acuity.
- if uterine hyperstimulation or hypertonic uterine contractions occur
- If there is an abnormal CTG
- SROM
- vaginal bleeding other than a show
- maternal request

Management of unsuccessful prostaglandin or intracervical balloon IOL

If induction is unsuccessful following Propess® removal at 24 hours or an intracervical balloon for 24 hours, the subsequent management options should be discussed with the patient and a O&G registrar or consultant and an individual management plan developed. Options are as follows:

- a balloon (if the failed method was Propess®)
- expectant management for 24 hours
- a further attempt at IOL
- caesarean section

If a further attempt at IOL is chosen:

- A second dose of controlled release vaginal PGE2 Propess® should not be given.
- Women who have had an intracervical balloon for 24 hours can be offered Propess® unless there are contraindications to their use

The decision to discharge a woman to return for a further attempt at IOL must be discussed with a consultant obstetrician and appropriate ongoing maternal and fetal monitoring arranged. An individual management plan must be documented on Epic.

Amniotomy / ARM

ARM should only be performed on labour ward. However, there may be delays in the transfer from the antenatal ward to a delivery room.

If there is no labour ward bed availability for women who are ARM-able and who have not had a balloon or prostaglandins, then after initial observations, CTG and assessment, they can go home to await bed availability on Labour Ward.

ARM can be used after vaginal prostaglandin PGE₂ or intracervical balloon when the cervix is clinically judged for an ARM to be possible.

There should be around 1 hour to allow for head descent after removal of Cook balloon before performing ARM. The woman should be encouraged to mobilise after the Cook balloon has been removed or to sit on a birthing ball.

ARM can be performed immediately after removal of Folley's.

The presentation and degree of engagement of the presenting part should be carefully established by abdominal palpation and ultrasound. This should also be confirmed during vaginal examination (VE) where possible prior to ARM. ARM must be conducted using a sterile amnihook.

ARM should be avoided if the baby's head is high. If ARM is indicated, a "controlled ARM" should be done by an experienced obstetrician, with theatre immediately available and the woman should be prepared for theatre. The bladder should be emptied prior to the ARM, and synthetic oxytocin augmentation commenced immediately following the ARM. The fetal heart should be monitored with continuous EFM if the presenting part is not stable or well applied to the cervix.

Following ARM, depending on the clinical circumstances and the woman's preference:

- encourage the woman to mobilise for up to 1-2 hours before reassessing the cervix. If labour is not established, augment with synthetic oxytocin, though not within 4 hours of a last misoprostol dose
- augment with synthetic oxytocin immediately
- delay starting oxytocin but explain to the woman it is likely labour will take longer and there is an increased risk of neonatal infection.

Use of synthetic oxytocin (Syntocinon®)

- Synthetic oxytocin without ARM should not routinely be used for IOL. Use of synthetic oxytocin without ARM should be a consultant decision
- discuss analgesia including epidural
- commence continuous EFM
- There should be a 30 minute interval between removing Propess® and starting synthetic oxytocin.
- All women undergoing induction of labour in the unit should have a fluid balance recorded - the problem of peripartum dilutional hyponatraemia has the potential to cause severe harm to labouring women and their babies and it is likely that it is under recognised. Physiological factors predispose pregnant women to hyponatraemia, especially where additional risk factors such as excessive oral intake, intravenous fluids and exogenous oxytocin are present.
- All woman in whom oxytocin is started should have U&E's checked at the time of starting oxytocin if not already done in the previous 24 hours. The results do not need to be awaited before starting oxytocin.
- All women in whom oxytocin is started, should have a FBC and g&s sent if not already done in the previous 48 hours.

The practice of administering intravenous fluids as a conservative measure in response to CTG concerns needs to be practiced with caution.

The dose regime for synthetic oxytocin augmentation is:

5 units of synthetic oxytocin in 41 ml of 0.9% sodium chloride to give an approximate concentration of 120 milliunits/ml

If prepared using 5 units/ml ampule final volume will be 42ml.

If prepared using 10 units/ml ampule final volume will be 41.5ml

Start at a rate of 0.5 ml/hr increasing as per regime every 30 minutes.

Time after starting (mins)	Infusion rate (mls per hour)	Dose of oxytocin (miu/min) (5 units of synthetic oxytocin in 41 ml of 0.9% sodium chloride)
0	0.5	1
30	1.0	2
60	2.0	4
90	4.0	8
120	8.0	16
150	12.0	24
180	16.0	32

Administer synthetic oxytocin through a syringe driver using a Y-connector. This acts as non-return valve to minimise the risk of oxytocin being forced up into a second infusion or as an additional bolus.

Doses over 10 ml/hr at (20miu/min) should only be used after discussion with the obstetric registrar or consultant.

The licensed maximum dose of synthetic oxytocin is 20 milliunits per minute.

The optimum frequency of contractions is 4 in 10 minutes.

Continue with maternal and fetal observations according to the [Care of Women in Labour](#) guideline.

Reassess progress 4 hours after regular contractions but no longer than 6 hours after starting synthetic oxytocin. Refer to the obstetric registrar if less than 2cm progress since the last assessment.⁷

When oxytocin should be stopped in the first or second stage of labour

Please refer to the [Care of Women in Labour](#) guideline.

If there are concerns about the CTG, synthetic oxytocin should be stopped and a full assessment of the fetal condition undertaken by an obstetrician before synthetic oxytocin is recommenced. This must be documented in the labour records.

A request to stop the synthetic oxytocin from the mother should be respected and the obstetrician informed. The woman should be reviewed by the obstetrician with an appropriate management plan formulated. This discussion must be documented on Epic. When synthetic oxytocin is stopped the reason should be clearly documented on Epic.

Post birth following an augmented labour

The synthetic oxytocin infusion should be stopped. If syntocinon is required for the management or prevention of postpartum haemorrhage then the post natal syntocinon regime should be used. Remember the risk of a postpartum haemorrhage is increased if oxytocin has been used.

Active management of the third stage is recommended in all women who have required oxytocin during labour. A postnatal oxytocin infusion should be considered in all patients with additional risk factors for postpartum haemorrhage.

Auditable Standards

- Continuous audit of numbers and outcomes of outpatient IOL.
- The number of women offered a membrane sweep prior to formal IOL.
- The number of women receiving vaginal PGE2 or intracervical balloon within two hours of arrival for IOL.
- The number of women in whom the Bishop's score is recorded in Flowsheet on Epic.
- Mode of birth following IOL.
- Maternal observations carried out before and during IOL, prior to established labour.
- Fetal heart rate monitoring carried out before and during IOL, prior to established labour.
- Women with a previous uterine scar that have the decision for IOL made by a consultant obstetrician and have an individual management plan on Epic.

Monitoring compliance

This guideline will be subject to three yearly audit and results presented to the department clinical audit meeting. Action plans will be monitored at the department clinical audit meeting. The audit midwife takes responsibility for initiating and reporting the audit.

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Appendix 1: Regional/AHSN Summary of Indications and Gestations for Induction of Labour

(please refer to trust guidelines of the relevant condition for detailed information)

Clinical condition	Recommended gestation of IOL (weeks) Minimum	Recommended gestation of IOL (weeks) Maximum	Priority level
GDM Low Risk Diet/Metformin Stable blood glucose Normal amniotic fluid volume & normal growth	40+1	40+6	2
GDM with possible Complications *Macrosomia (AC >95 th centile &/or EFW >95 th centile at 36 weeks accelerated growth from previous scans) on case by case basis /consultant decision Poor sugar control		40+6	1
Hypertension (non proteinuric and normal bloods) Not requiring admission		41	2
IUGR/SGA Including low CPR/Raised dopplers	Individualised care plan from Consultant Obstetrician / Fetal Medicine		1
Low PAPPA – normally grown		41	2
Low PAPPA – concerns with growth/dopplers/PET		40	2
Maternal age 40-44 at booking (otherwise low risk)	39	41	
>45 old at booking	38	39	2

Maternal mental illness	Booked only as part of perinatal mental health plan		1
Multiple pregnancy DCDA Twins	37	38	2
Obstetric cholestasis Irrelevant of treatment Bile acids >40 AT ANY STAGE	39	40	2
Patients on therapeutic anticoagulation – after discontinuing LMWH for 24 hours		41	1
Post dates	40+10	42	1
Pre-eclampsia Diagnosed at <37+0	Consultant decision		1
Diagnosed at >37+0	Induce asap after diagnosis (usually within 48 hours)		1
PRE-EXISTING DIABETES (individual plan by diabetic team depending on clinical picture) Type 1 or 2	37+0	38+6	1
Previous Intrauterine fetal demise	Individualise – usually at 39 weeks		2
Previous traumatic birth	Individualise but ideally not earlier than 39 weeks		2
Raised PCR >30		41	2
VBAC with no spontaneous labour (offer balloon)	40	40+10	2

The following are not an indication for IOL

- IVF only – check if maternal oocytes used (egg donation would carry more risk)
- PGP
- Polyhydramnios (if no GDM/other concerns)
- Reduced fetal movements (unless another indication)

Appendix 2 – Patient Information Resource

Oral Misoprostol Tablets (Angusta® Tablets)

Oral misoprostol, a prostaglandin medication, is used to induce labour by softening the cervix and starting contractions. Midwives will provide a tablet every 2 hours, up to 8 times, aiming to stimulate your uterus to contract and dilate your cervix.

Your baby's heart rate will be monitored before the first dose and then with a continuous monitor for 30 minutes or longer if required approximately every four hours. A vaginal examination will be offered as a baseline assessment at the beginning of the induction and after the last dose, or sooner if you show signs of active labour.

You can eat, drink, shower, bath, and walk while taking misoprostol. The medication may cause mild cramping that could become stronger as labour progresses. Occasionally, labour begins without any further intervention. Most women will proceed to the next steps of induction that include having your waters broken to further stimulate the hormones of labour and allows for the use of oxytocin to commence contractions if required.

If your waters cannot be broken after 8 doses (about 8% of cases), your care team will reassess and discuss alternatives, such as a cervical ripening balloon or, if necessary, a caesarean birth.

- Oral misoprostol will not be recommended for our induction if any of the following risk factors are present:
- Known allergies linked to misoprostol;
- Active labour has started;
- Previous uterine or cervical surgery (for example previous caesarean birth);
- Placenta praevia/ accreta;
- Kidney failure;
- Signs of fetal compromise including abnormal CTG, meconium stained liquor, vaginal bleeding;
- Fetal malpresentation (the baby's head is not leading into the pelvis for birth)

Risks	Benefits
<i>Side effects of the drug may occasionally lead to nausea and vomiting but is uncommon.</i> <i>Mitigation – we can provide anti-sickness medication to reduce these side effects if they occur.</i>	<i>This drug is taken through the mouth not requiring vaginal examination with each dose.</i>
<i>Hyperstimulation – the drug may cause you to start contracting too much. The evidenced risk of this is less common than other methods of induction using medication.</i>	<i>Some research indicates lower chance of caesarean birth compared with other induction drugs.</i>

<i>Mitigation – we can give you a drug to stop the contractions if they are becoming too frequent.</i>	
	<i>Some research indicates a reduced requirement for oxytocin in labour as part of the induction pathway.</i>

Appendix 3 – Cook Balloon Competency Document

Cervical Ripening Balloon FAQs/Competency Document

1. What is it and how does it work?

This is a device used for cervical ripening as the first part of induction. It is passed through the cervix. Two balloons are inflated with up to 80mls saline, one inside the uterus just above the cervix and the other in the vagina just below. The balloon is claimed to stimulate local prostaglandin release and leads to cervical ripening through the two balloons squeezing the cervix (NICE 2021) The balloon itself is left in for 12-24 hours unless it falls out by itself which will happen once the cervix reaches 4cm dilatation. When the balloon is removed 90% of women should be suitable for ARM.



2. Who is it suitable for?

It is suitable for most women. The cervix is a structure that is not closed (although it might feel closed to us) and therefore we are told it is possible to introduce the device through even the most unfavourable cervix. There is a stylet which produces rigidity to aid insertion.

3. Why are we introducing this?

- Increased maternal satisfaction
- Giving women more choice
- Allowing patients who are suitable to go home with the balloon in situ
- Less pain/hyperstimulation
- Less monitoring needed on site
- Better flow of patients through the service and shorter stay
- Midwives confident and competent to insert these devices therefore maintaining MW led IOL pathway

4. Who's going to put it in?

Our intention is that midwives on the antenatal ward will eventually put the balloons in with the support from the medical team. The training will be cascaded down. The obstetricians will be trained so they can offer support and training. The aim is to do insertions in the Bubble room to ensure privacy for women and good organisation of equipment needed.

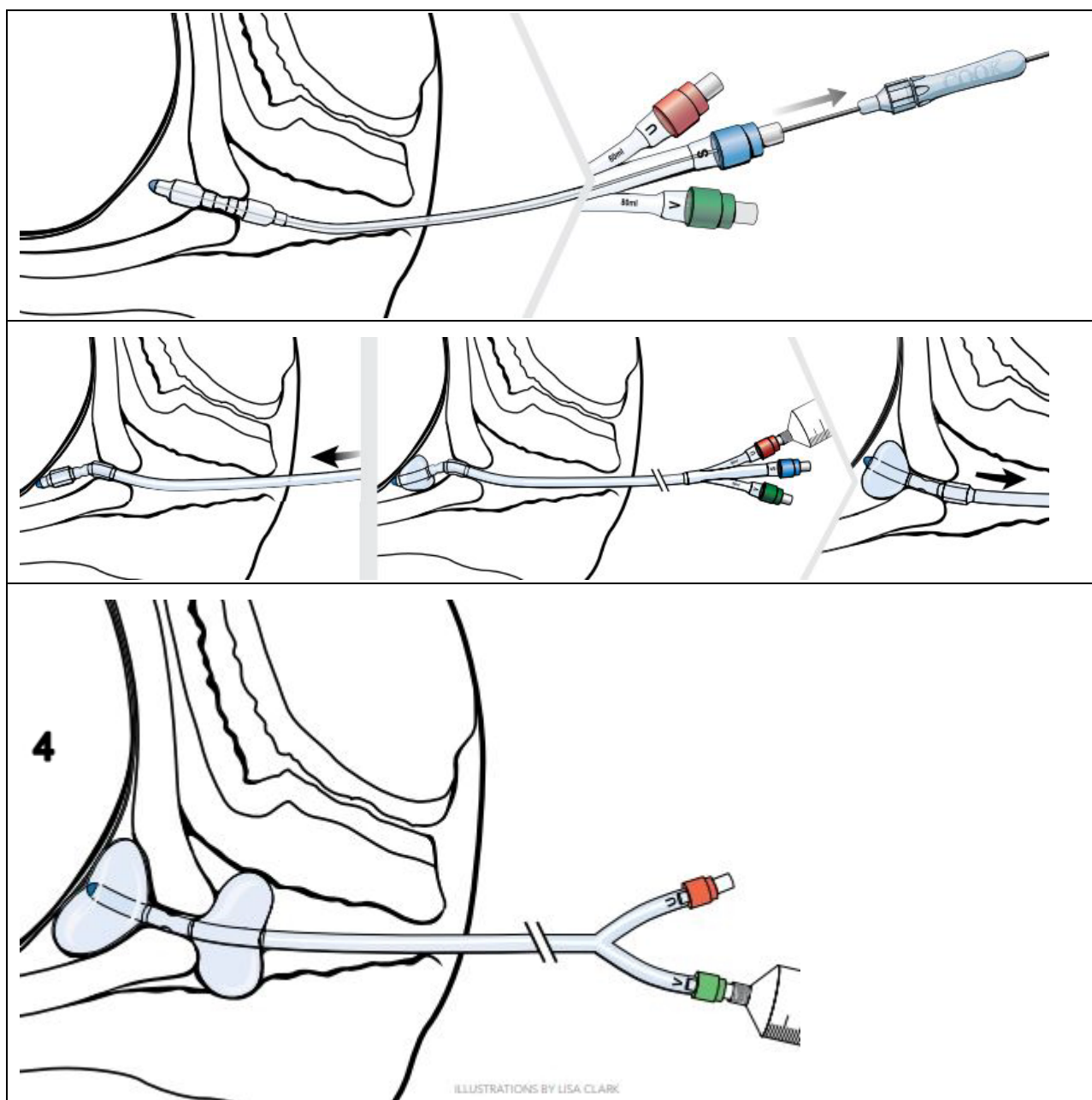
5. How is it put in?

It's best to use lithotomy position as this reduces the length of time it takes to insert the balloon and offer Entonox. The cervix ideally should be visualised. The device has an introducer so that it can be passed gently through the cervix even when it appears to be closed. The cervix is cleaned and the device is passed through the cervix so that both balloons are inside the uterus. It may be held by a spongeholder. Once the cervix has been traversed (by the uterine balloon) the introducer must be removed.

The uterine balloon is inflated with 40mls saline and the device gently pulled back so that the vaginal balloon is back in the vagina.

The vaginal balloon then has 20mls saline added and the speculum removed and both balloons are filled to a maximum of 80mls saline. The device does not need to be attached to the woman's leg as this may cause additional discomfort. It can be tucked inside the underwear.

The balloons are colour coded and U for uterine V for vaginal and S for stylet.



6. What happens when it is in?

Because this is a mechanical method and there is no increased risk of hyperstimulation, additional surveillance is not required. We recommend daily CTG and observations. It is important to monitor bladder function as occasionally women have found it difficult to empty their bladder. In that situation 20mls saline should be removed from the vaginal balloon. Please ensure that the patient is able to void a good volume of urine post insertion

7. Is it painful?

Women generally tolerate it well and feedback received by other units has been positive. Entonox can be offered for insertion. There can be some discomfort 2-3 hours post insertion so paracetamol and dihydrocodeine should be prescribed and offered.

8. Does it cause labour to start?

It may occasionally start labour however it is a mechanical device to ripen the cervix.

9. When does it come out?

The balloon will fall out when the cervix reaches approximately 4cm. Alternatively it should be removed if SROM occurs (because of risk of infection) or after 12-24 hours. It can stay in situ for a maximum of 24 hours. There is no benefit to it staying in beyond this. The balloon should be removed on labour ward prior to ARM.

10. What happens once it's out?

Once the balloon is removed we should continue with the induction by performing an ARM and starting oxytocin on labour ward. We are told that over a period of time the cervix may shrink after removal therefore we need to ensure close communication with the delivery suite to make sure there are resources to continue with the induction before the balloon is removed. This is why it can be left in for 24 hours if the unit is too busy to facilitate transfer initially.

11. What happens if it doesn't work?

Evidence suggests that 90% women will be suitable for ARM if the balloon has been inserted properly. If ARM is not possible liaise with an obstetrician to make a plan for Propess® or prostin.

[Cook Cervical Ripening Balloon Animation | Reproductive Health \(cookmedical.com\)](https://www.cookmedical.com/uk/en/propess/propess-ripening-balloon-animation)

Cervical Ripening Balloon Competency Document

CRB may be inserted by a midwife or obstetrician who have completed the appropriate training and been assessed as competent by a colleague already deemed competent.

Explanation & consent

1. Confirms the mothers name & reason for IOL
2. Discusses signs and symptoms of potential spontaneous rupture of membranes with the mother
3. Are there any high risk factors? High head, SROM, can ARM be performed?
4. Identifies position of placental site from maternal records
5. Give a detailed explanation of the procedure to the mother & how she will be positioned for the procedure
6. Obtain verbal consent for the procedure

Equipment & Positioning

1. Gather relevant equipment – speculum, Cook Balloon with stylet, 2 20ml syringes, kidney dish with saline (80mls per balloon) sponge holding forceps, gauze swabs/cleaning solution, Entonox and good lighting, lithotomy couch.
2. Check allergy status
3. Recommend the patient to void before the procedure
4. Chaperone present for the procedure
5. Offer Entonox and explain how to use it
6. Position the patient in lithotomy position
7. Ensure good lighting
8. Gain verbal consent

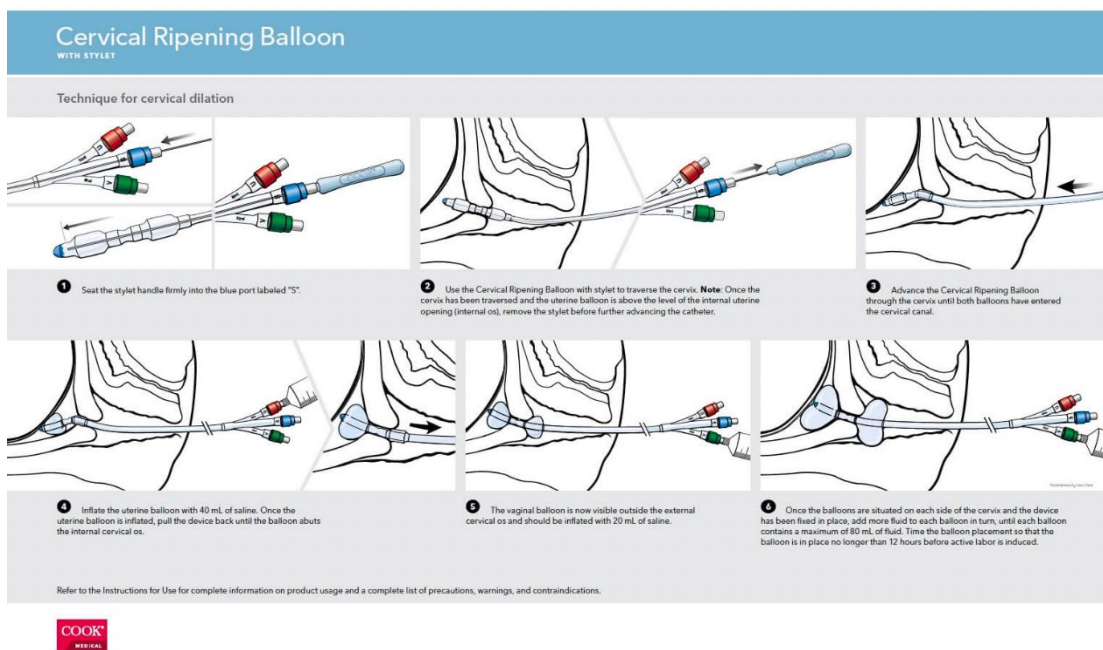
The procedure

1. Application of correct aseptic technique
2. Lubricate the speculum
3. Gently insert the speculum into the vagina (it may be helpful to attain a Bishops Score and perform a vaginal examination to assess whether ARM possible)
4. Secure the speculum ensuring the cervix is visualised clearly
5. Clean the cervix using a dry sterile swab
6. Insert the Stylet into the stylet section (blue port) section of the balloon catheter (if used) the use of sponge holders is acceptable
7. Insert the balloon catheter into the vagina, proceeding through the external and internal os of the cervix until both of the balloons at the top of the catheter are no longer visible
8. Remove the stylet after insertion of the first balloon into the external os before advancing the catheter any further
9. Inflate the uterine balloon (red port) with 20mls normal saline
10. Pull back on the catheter in a downward motion to ensure that the CRB is in the correct place
11. Inflate the vaginal balloon (green port) with 20mls normal saline
12. Remove the speculum
13. Continue inflating the CRB alternating between the vaginal balloon (green port) and Uterine balloon (red port) to a total of 80mls in each balloon

Documentation

1. Document procedure & findings in the maternal records. Remember to include the volume of saline in each balloon so the practitioner is aware how much is required for removal.
2. To remove the balloon simply remove the total fluid volumes from the vaginal and uterine balloons and remove – a speculum is not required

[Resources: Cook® Cervical Ripening Balloon with Stylet | Reproductive Health \(cookmedical.com\)](https://www.cookmedical.com)



Full Version Control

Version:	2.2
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Key words:	Induction of Labour, IOL, prostaglandin, Propess®, Prostin, Augusta®, augmentation, balloon, artificial rupture of membranes, ARM, oxytocin.

This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date.

This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version History

Version	Date	Guideline Lead(s)	Status	Comment
WPH V1.3	27.09.16, Updated 18.03.2019	Eman Jwarah, A. Kirkpatrick, A. Raafat, Z. Jones, I. Kemp, K. Phillips, S. Hutton	Interim	O&G Clinical Governance Committee (27.09.16). Please note: main body of the guideline merged but separate versions existed for each site due to different oxytocin regime
FPH V1.2	27.09.16, Updated 19.03.2019	Eman Jwarah, A. Kirkpatrick, A. Raafat, Z. Jones, I. Kemp, K. Phillips, S. Hutton	Interim	O&G Clinical Governance Committee (27.09.16). Please note: main body of the guideline merged but separate versions existed for each site due to different oxytocin regime
1.0	April 2021	Alison Kirkpatrick	Final	Updated and approved at obstetric clinical governance meeting as a cross-site guideline.
1.1	20 May 2021	Alison Kirkpatrick	Interim	Clarification added to the Use of synthetic oxytocin (Syntocinon®) section. Chair's action by A Deans
1.2	Jan 2022	Z. Jones	Draft	Updated in line with NICE 2021 (guideline version not published on intranet)
1.3	June 2023	N. Opare	Interim	Updated to include Trust electronic records Epic; criteria for outpatient induction and ward leave; summary of conditions and suggested gestations for IOL (not published)
2.0	July 2024	M. van de Venne, R. Grainger	Final	Scheduled review.
2.1	August 2024	A Deans	Interim	Delete 'home leave' under ARM (p19) per Chair's Action.
2.2	May 2026	R Edwards, N Rose-Stone	Interim	Addition of Angusta® Oral Misoprostol regime Approved updates: Cross Site obstetric Clinical Governance meeting 16/06/2026

Related Documents

Document Type	Document Name
Guideline	Antenatal Care and Booking
Guideline	Birth Choices after Caesarean Birth
Guideline	Care of Women in Labour
Guideline	Intrapartum Fetal Heart Monitoring
Guideline	Management of Suspected Large for Gestational Age Fetus in Non-diabetic Mothers
Guideline	Pre-labour Rupture of Membranes at Term
Guideline	Preterm Pre-labour Rupture of Membranes
Guideline	Use of Complementary Therapy for Prolonged Pregnancy